PROPOSAL EVALUATION

Proposition 1E Integrated Regional Water Management (IRWM) Grant Program

Stormwater Flood Management Grant, Round 2, 2013

Applicant	City of Ontario	**Amount Requested**	$7,820,000
Proposal Title	Francis Street Storm Drain and Ely Basin Flood Control and Aquifer Recharge Project	**Total Proposal Cost**	$16,640,000

PROJECT SUMMARY

The project constructs a new stormwater interceptor from an urban watershed area of 956 acres that currently floods a 277 acre urban area. The stormwater will be conveyed with the construction of a new storm water interceptor to transmit the stormwater to the existing Ely Basins for additional groundwater recharge. The project also includes modification to the Ely Basins. The basins will be excavated and re-graded to accommodate the additional stormwater flows.

PROPSAL SCORE

Criteria	Score/ Max. Possible	Criteria	Score/ Max. Possible
Work Plan	**6/15**	Technical Justification	**2/10**
Budget	**2/5**		
Schedule	**3/5**	Benefits and Cost Analysis	**21/30**
Monitoring, Assessment, and Performance Measures	**2/5**	Program Preferences	**7/10**
		Total Score (max. possible = 80)	**43**

EVALUATION SUMMARY

WORK PLAN

The criterion is marginally addressed and documentation is incomplete and insufficient. The work plan discusses the project goals and objectives but does not relate the project to the IRWM plan. The task descriptions lack adequate detail to determine if the work can be implemented as proposed. For example, construction details are vague and lack specific construction materials, equipment, and methods. Some of these details exist in the budget section but are not thoroughly explained in the work plan. Some aspects of the project are simply not addressed. For example, the disposition of the 500,000 cubic yards of cut material from basin excavation is not discussed, other than that they will be "disposed" on-site. Yet, the project site map does not clearly show available area adjacent to the existing recharge

ponds to dispose of this large amount of soil. In another example, the work plan does not identify the current functions of the Ely Basins, other affected parties such as the owners and operators of the basins, or any coordination that may be necessary. The list of required permits is vague and does not include their current statuses, but it appears that the applicant has not yet applied for an NPDES permit or a permit to modify a recharge basin from the RWQCB. The applicant states that it has not yet begun CEQA review for the project, and there is no prediction regarding what type of CEQA document will be needed. Although the proposal states that the project design is 90% complete, no hydrology and hydraulics report, nor any plans or specifications, are included with the application. No scientific or technical information is submitted to support the feasibility of meeting the goals and objectives of this project.
The work plan does not address data management, as described in the IRWM Plan Standard in the 2012 Guidelines. The monitoring program, described in Subtask 9.4, is very vague and deliverables are poorly defined. The work plan does include maps that show the project location.

BUDGET

The budget for the project does not have detailed cost information, many of the costs cannot be verified as reasonable, and supporting documentation is lacking for all of the budget categories. No labor costs, hourly wage rates, hours, labor categories, or other details are provided for any of the tasks. There is a list of costs for construction expenses, but the work plan does not include this level of detail so it is difficult to relate the costs to the task descriptions in the work plan. No cost breakdown is provided for any of the other tasks. Grant administration, environmental compliance, construction administration, and construction contingency costs are estimated only as percentages of the construction costs based on "historic City projects," but no other documentation, such as the costs for past City projects, is included with the budget. The budget detail provided is not consistent with the work plan; work plan steps identified under Project Design and Engineering (Category 5) and subtasks in Task (construction) are not shown in the budget. It is therefore not possible to determine if the budget for these activities are reasonable.

It also appears that the total proposed budget may not meet the minimum SWFM funding match requirement of at least 50% of the total project cost. The application proposes to finance the project with both Proposition 1E SWFM and Proposition 84 IRWM grants. As a result, the combined funding match is 48%. (See summary budget table in Attachment 4.) In addition, the construction costs in the detailed construction cost table are rounded up by $20,000; this rounded total is the amount used in the summary budget table.

SCHEDULE

The schedule is generally reasonable, indicates a readiness to begin construction no later than by October 2014, but is not consistent with the tasks presented in the work plan. An inconsistency exists with the work plan in that the schedule contains a subtask for obtaining a permit from the U.S. Army Corps of Engineers, which is not described in the work plan. Additionally three tasks, Development of Financing, Development of Project Management Plan, and Progress Reports and Final Report Submittals are not found in the project schedule.

MONITORING, ASSESSMENT, AND PERFORMANCE MEASURES

The criterion is marginally addressed and documentation is incomplete and insufficient.

The proposed monitoring concepts are appropriate for the benefits claimed but monitoring targets are not clearly identified nor quantified and do not offer practical means for monitoring project performance. For example, the target for water quality is "detectable improvement in groundwater quality," but no target water quality indicators are identified. The only flood control target identified is for the maximum flood event, and the water recharge target appears to be a single averaged value. In addition, no method is proposed for identifying or establishing benchmarks or baselines. For example, the Ely Basins appear to already have been modified and used to recharge storm water and

possibly recycled water; this baseline condition is not documented in the application. Without knowing the baseline condition, the recharge benefit of the project cannot be estimated.

Although measuring tools are described, they would not effectively monitor project performance or target progress. The methods for using these tools are not described and some of the methods, such as photographic documentation, as described, do not appear to allow quantitative assessment. Therefore, the proposed monitoring program will not effectively measure the project's degree of success in meeting the claimed physical benefits.

TECHNICAL JUSTIFICATION

The technical justification criterion is marginally addressed and documentation is incomplete and insufficient. Technical justification lacks documentation that demonstrates or supports the technical adequacy of the project, and the physical benefits are not well described.

No technical analysis of flood conditions or benefits is provided. A description of conditions, a flood inundation map, photographs, and newspaper articles are the only documentation submitted. No quantitative analysis and no record of the historical frequency of flooding or the damage/costs incurred are included.

No technical analysis of recharge benefits is provided. No baseline is established; the recharge benefits table does not show how much water is recharged in the Ely Basins without the project. The applicant assumes that all water (772 AF/YR) that enters the basins will be recharged without loss, but no supporting calculations, models, or other supporting evidence is provided. For example, recharge benefits could have been supported by calculations of net increase in recharge by calculating the marginal increase from the project against the baseline (without project) condition. Also, increasing the storage volume of a basin alone is not sufficient to demonstrate that the basin will offer increased groundwater recharge. If the volume cannot be infiltrated before the following storm displaces it, increased recharge may not be realized.

The proposal also claims benefits of reduced greenhouse gases and improved air quality. Although the applicant shows that for each AF of water recharged, considerable energy is saved (and thus GHG emissions) from offsetting water imported from the delta, the applicant has not considered project construction emissions, which would negatively offset the savings. Also, to the extent that the quantity of recharge is not adequately supported, as noted above, the GHG emissions reductions (per AF of increased supply) would need to be adjusted based on the amount of verified recharge.

Finally, the proposal claims that the project will reduce pollutants including sediment, nutrients, trash, metals, bacteria, virus, oil, grease, organics and pesticides, but provides no technical information to justify this claim. No water quality data for the storm water runoff or groundwater is provided for either existing conditions or expected project improvements.

BENEFITS AND COSTS EVALUATION

Collectively the proposal is likely to provide a high level of benefits in relationship to cost, but the quality of the analysis or clear and complete documentation is lacking.

The net present value (NPV) of costs is $15.136 million. The NPV of FDR benefits is estimated to be $55.44 million, and the estimated NPV of water supply benefits is $8.47 million.

The F-RAM application includes flood damages for 1 in 10, 1 in 25 and 1 in 100 year events. An area inundation map is provided for the 1 in 100 year event. It is not clear how event damages were developed for the 1 in 10 and 1 in 25 year events. The FRAM application suggests an estimated annual damages (EAD) reduction of $10.404 million which would be worth $164 million in NPV. The Table 11 EAD calculation, resulting in an EAD of $3.518 million, is faulty. The analysis starts with an event at which some damage occurs and the interval probabilities are not calculated correctly.

Furthermore, the Table 11 analysis assumes a “probability of structural failure “without project that does not apply in this case. A corrected EAD of $8.56 million is equivalent to $135 million in NPV terms.

The stormwater recharge benefit might be discounted from the State perspective to the extent that the water would be captured and used by other people downstream. Still, if only the FDR benefits are taken, then this still appears to be an economical project. A higher score is not provided because information regarding how event damages is calculated, especially for the 1 in 10 and 1 in 25 year events, is not provided.

PROGRAM PREFERENCES

The applicant meets 3 program preferences and 4 statewide preference: Include Regional Projects, Effectively Integrate Water Management Programs, Contribute to CALFED Objectives, Drought Preparedness, Use and Reuse Water More Efficiently, Climate Change Response Actions, and Practice Integrated Flood Management.